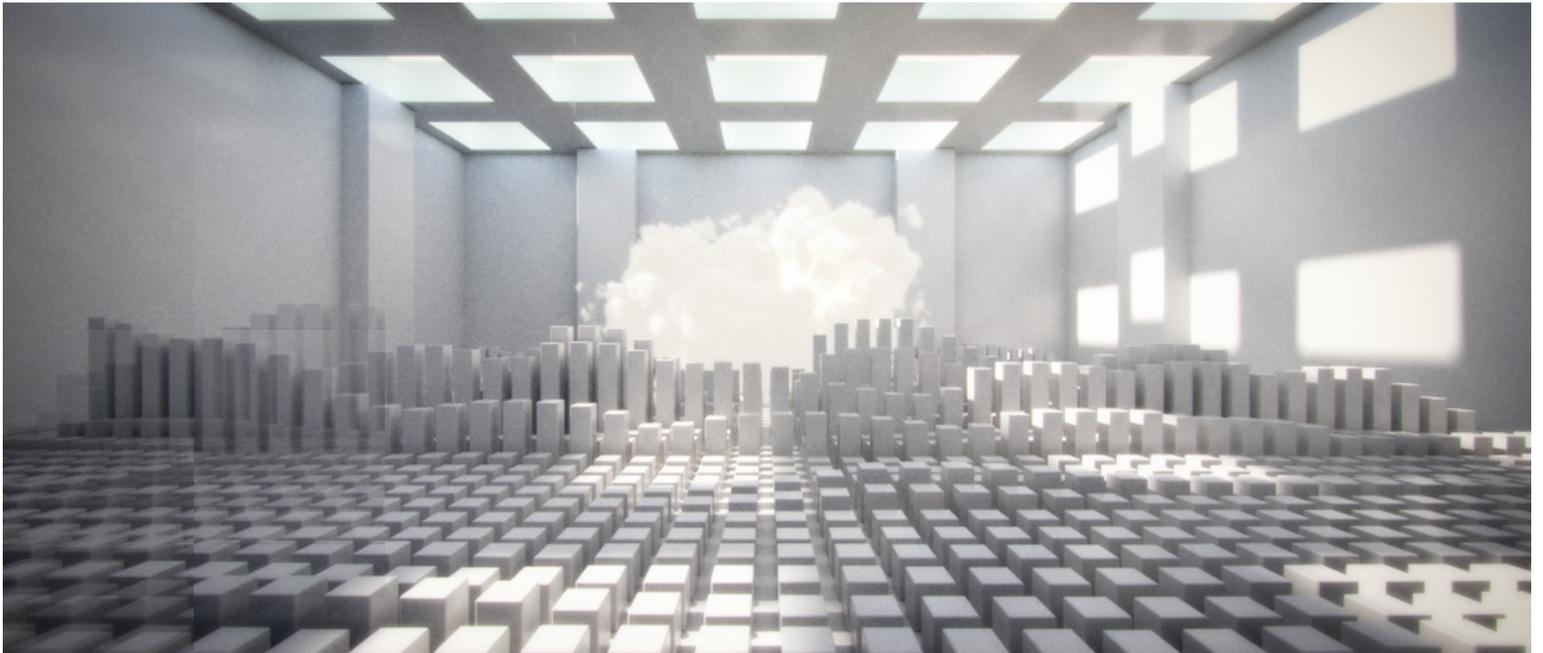


Procedural Animation in Houdini 12



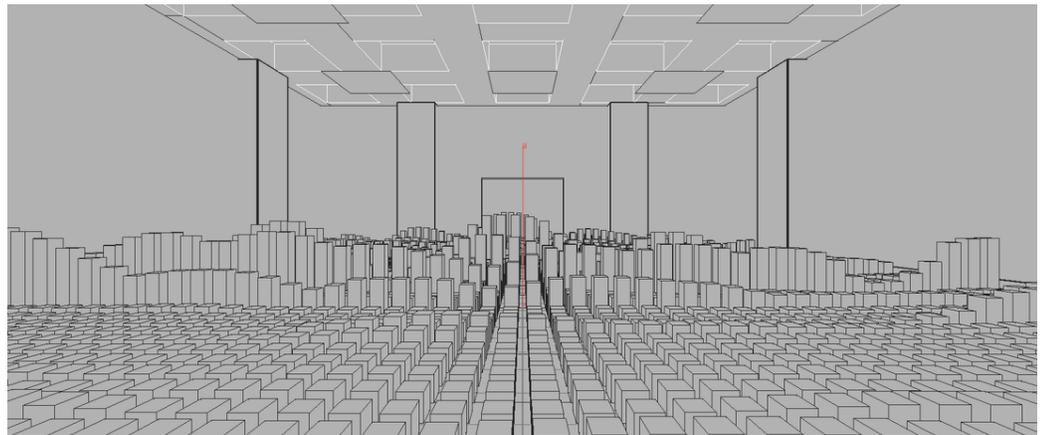
Statistics

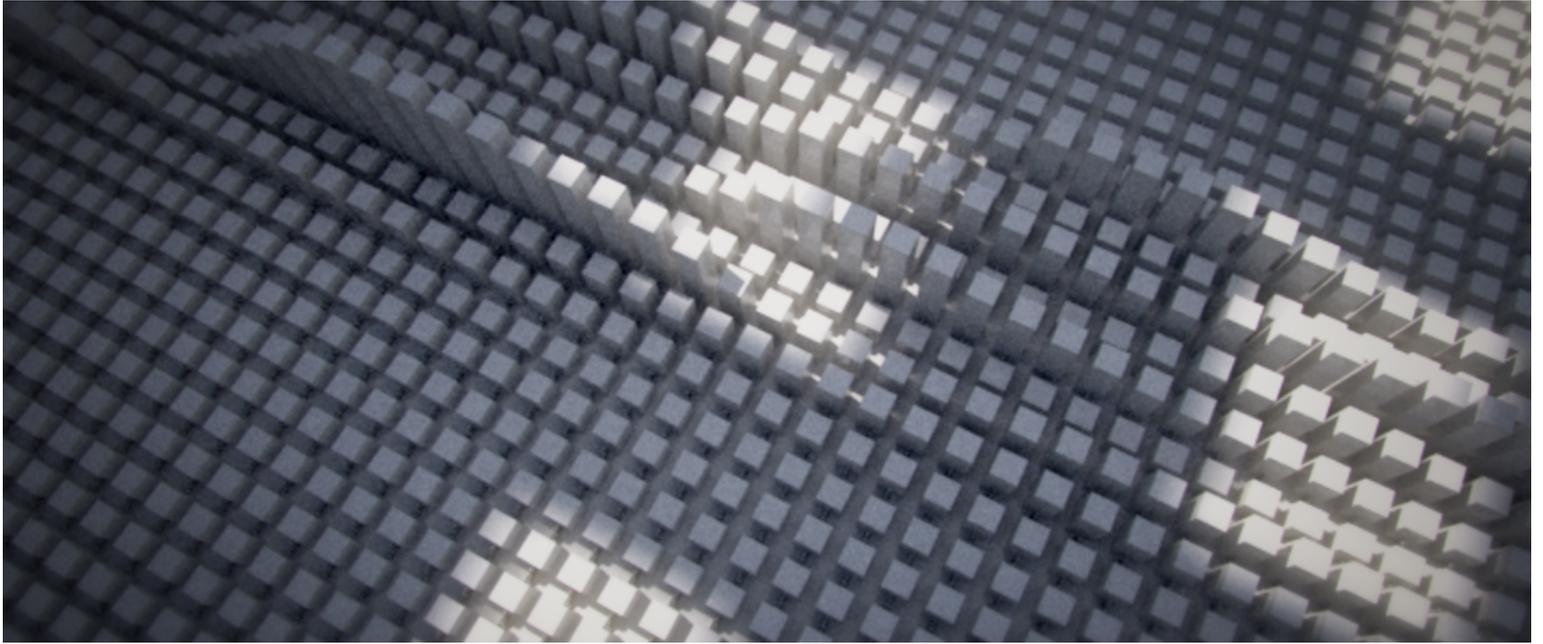
Average Render Time

- 5 - 10 mins per frame
- 720 x 306 (aspect 2.35 : 1)
- Sample Rate 6 x 6
- Noise Value 0.05

Lights

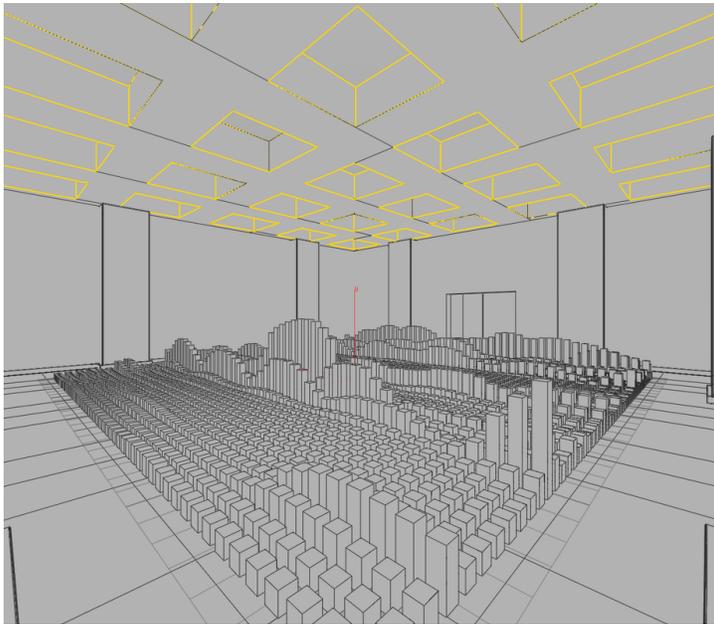
- 1 Physical Sun
- 1 Portal Light
- 3 x 3 Area Lights





Idea

The idea of this short animation is to create a music driven pin-board that has believable movement and realistic rendering.

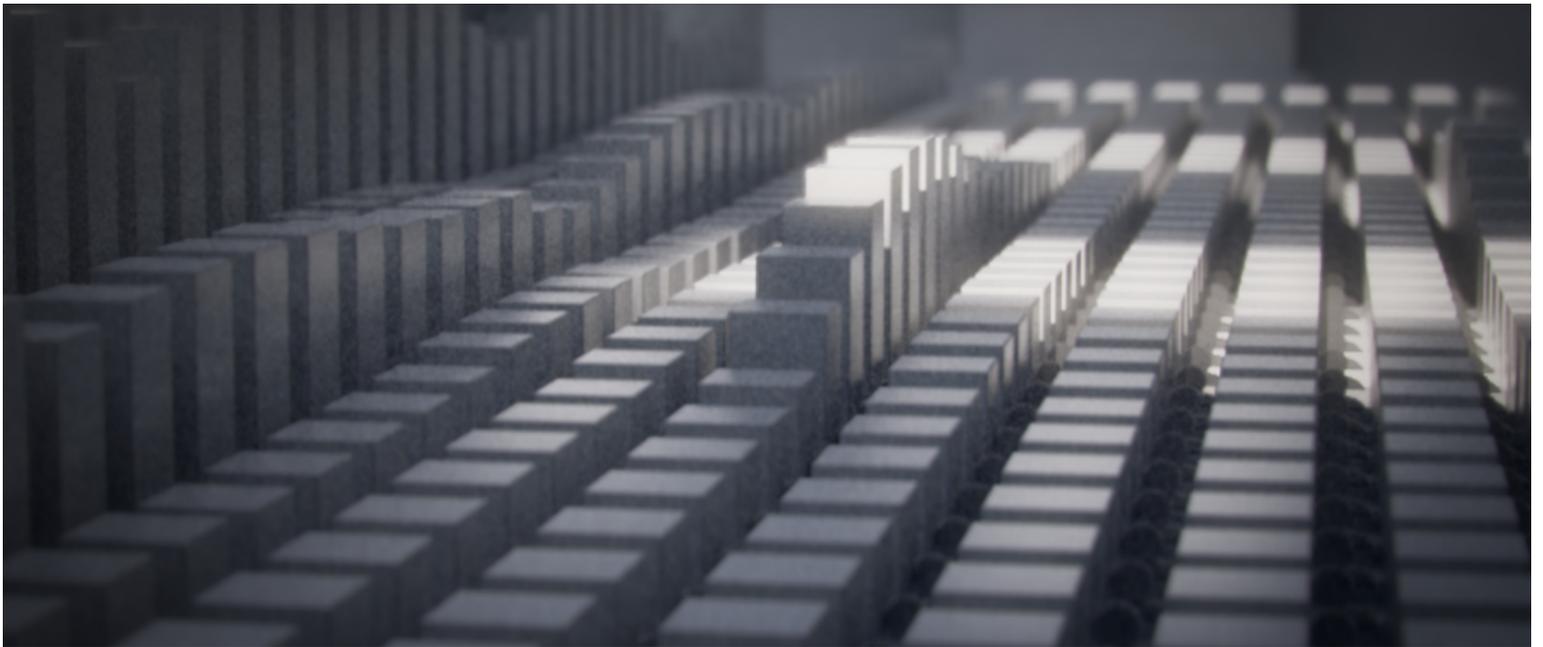


Lighting Solutions

In order to achieve a believable and natural interior lighting, a portal light geometry is being used as interior fill light (as highlighted on left).

Other area lights were also used as softboxes in close-up shots.

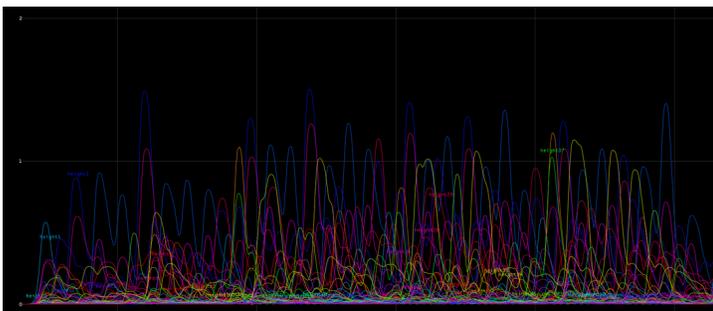
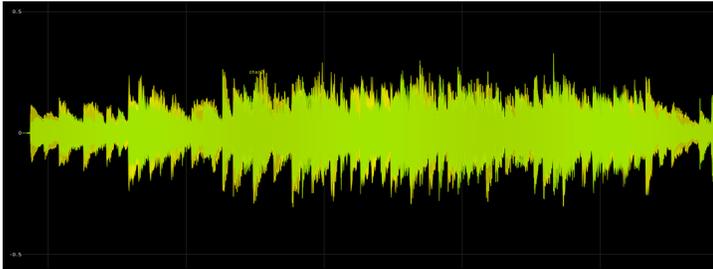
The main light source is Houdini's sky and sun light.



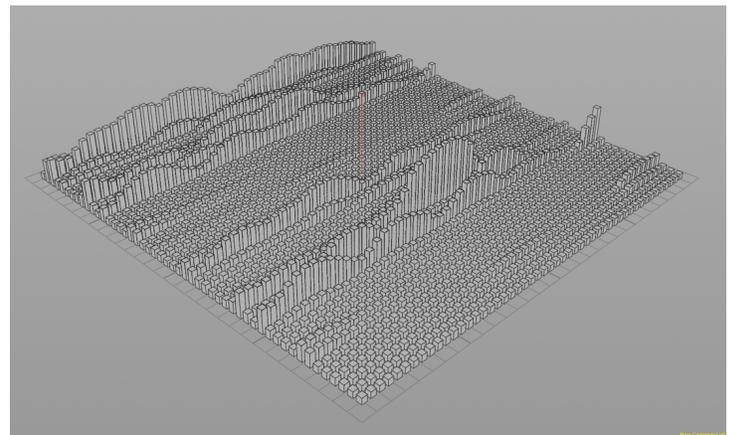
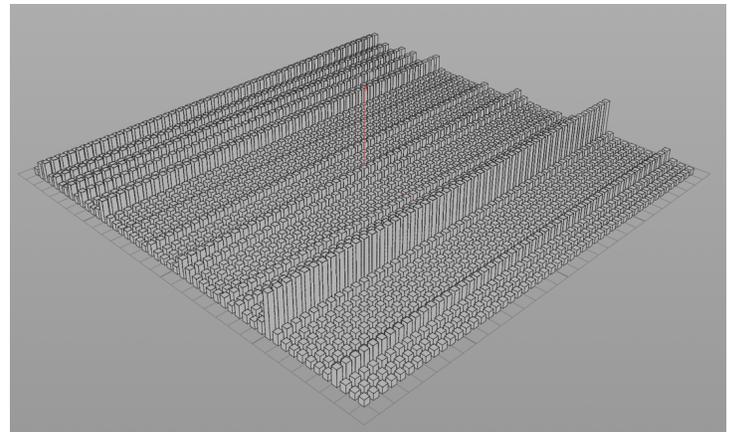
Animation Challenges

Music driven animation will use loudness, pitch or frequency of a given sound file to control the object's parameter, such as height, size or color.

In the CHOP network, a **Pitch** node is used to separate the pitches according to frequency from 110Hz - 660Hz. To present the waveform on the pin-board, a **Shift** node is added so that at each point it will have a delaying effect.



(above) using **Pitch** node to separate the animation curve



(above) before and after applying a **Shift** node to the waveform CHOPs

Inspiration

Installation Arts. Click on image will open the source of these references.

